

ABSTRACT

CONTROL OF ACCESS TO A MEMORY
BY A DEVICE

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The present invention provides a data processing apparatus and method for controlling access to a memory. The data processing apparatus has a secure domain and a non-secure domain, in the secure domain the data processing apparatus having access to secure data which is not accessible in the non-secure domain. The data processing
10 apparatus comprises a device coupled to a memory via a device bus, and operable, when an item of data in the memory is required by the device, to issue onto the device bus a memory access request pertaining to either the secure domain or the non-secure domain. The memory is operable to store data required by the device, and contains secure memory for storing secure data and non-secure memory for storing non-secure data. In accordance
15 with the present invention, the data processing apparatus further comprises partition checking logic coupled to the device bus and operable whenever the memory access request as issued by the device pertains to the non-secure domain, to detect if the memory access request is seeking to access the secure memory and upon such detection to prevent the access specified by that memory request. This approach significantly improves the
20 security of data contained within a secure portion of memory.

Figure 47